JUNE 13—JULY 22, 2011

NUCLEAR FORENSICS UNDERGRADUATE SUMMER SCHOOL 2011

WASHINGTON STATE UNIVERSITY, PULLMAN WA

Application Deadline March 18, 2011

Undergraduate Students specializing in the physical sciences are encouraged to apply. Applicants must be US Citizens. Fill out the ONLINE APPLICATION (link below).

Applicants must submit:

- Brief Statement of Intent stating strengths, goals and interests
- Current Resume
- University Transcript (with copy of Spring 2011 schedule)
- One Letter of Recommendation from a Faculty Member or Technical Reference

Submit application materials electronically to:

http://institute.lanl.gov/institutes/application/

Students will be notified of selection by March 25, 2011 (Requests for early decision can be considered individually—contact Susan Ramsay)

For more information:

Susan Ramsay
Los Alamos National Laboratory
Email: ramsay@lanl.gov
Phone: 505-665-7214
Fax: 505-665-7895

Student Stipend

Each student will receive room, one meal per day, and a $5,000 stipend that includes travel.

PURPOSE

In its second year, this six-week summer school, to be held June 13 -July 22 on the Washington State University campus (shown above), is designed to provide comprehensive, experimental, hands-on training in topics essential to nuclear forensics as a means of interesting students in pursuing graduate studies in technical fields related to nuclear forensics.

TECHNICAL FOCUS

Students will be trained in topical areas such as:

- Nuclear Decay
- Atomic and Nuclear Structure
- Nuclear Material Processes and Uses
- The Nuclear Fuel Cycle
- Radiation Detection
- Standard Analytical Methods
- Environmental Radiochemistry

COURSE FORMAT

Two 2-hour blocks of lectures will be presented Monday-Thursday, with Friday reserved for hands-on laboratory experiments. Coursework will cover major topics in nuclear and radiochemistry, as well as in the chemical and physical characterization of actinide-bearing materials.

OBJECTIVES

At the completion of this summer school, students will understand:

- The chart of nuclides, and be able to utilize it
- Different modes of radioactive decay
- Components of the nucleus and how it influences nuclear properties
- How fission is induced and the resulting products
- Radiation detection and mass spectroscopy, and be able to determine isotope concentration or ratios
- The fundamental components and chemistry in the nuclear fuel cycle
- The chemistry of key radionuclides in applications important to nuclear forensics
- The application of analytical methods in characterizing materials
- Contemporary issues in nuclear forensics

FIELD TRIP

The 2011 Nuclear Forensics Summer School will include a field trip to a National Laboratory to provide participants a first-hand view of an operational environment.

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